

8 th International Multidisciplinary Conference on Current Research Trends-2023

8th IMCCRT 21st & 22nd April 2023

CONFERENCE PROCEEDING



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Organised By - IIKR, Research Circle , CSRfirst Research

Consultancy and IT partners Varshyl Technologies Pvt

**8th Virtual International Multidisciplinary Conference on
Current Research Trends-2023 (IMCCRT-2023)**

21st & 22nd April 2023

PROCEEDING BOOK

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INTRODUCTION TO IMCCRT 2023

The **INTERNATIONAL MULTIDISCIPLINARY CONFERENCE ON CURRENT RESEARCH TRENDS-2023 (IMCCRT-2023)** is a virtual conference which will be reaching the audience all over the world. In this testing **International Institute of Knowledge and Research (IIKR)**, **CSRfirst Research Consultancy** and IT partners **Varshyl Technologies Pvt Ltd** decided to make the best use of digital world to reach researchers all over the world crossing all barriers. The participants of this conference will get a chance to interact with researchers across the world with minimum cost and latest technology. In addition, the Research circle app will be launched during the conference, this app is a one stop solution to all the researches needs. All the participants will be introduced to this platform to stay connected with researchers from different part of the world.

WELCOME MESSAGE FROM THE ORGANIZING CHAIR

On behalf of IMCCRT 2023 committee, we welcome you all to the **INTERNATIONAL MULTIDISCIPLINARY CONFERENCE ON CURRENTRESEARCH TRENDS-2023(IMCCRT-2023)** is a **virtual conference which will be reaching the audience all over the world**. In this testing times Lovely Professional University (LPU), India and Statistical and Informatics Consultation Center, University of Kufa, Iraq, Universitas Sebelas Maret (UNS), Indonesia along with International Institute Of Knowledge and Research (IIKR) , CSRfirst Research Consultancy and IT partners Varshyl Technologies Pvt Ltd decided to make the best use of digital world to reach researchers all over the world crossing all barriers. The participants of this conference will get a chance to interact with researchers across the world with minimum cost and latest technology. In addition, the Research circle app will be launched during the conference, This app is a one stop solution to all the researches needs. All the participants will be introduced to this platform to stay connected with researchers from different part of the world.

Professor. Dr. Pavitar Parkash Singh
Organizing chair – IMCCRT 2023

WELCOME MESSAGE FROM THE MANAGING EDITOR

The Seventh Virtual International Multidisciplinary Conference on Current Research Trends-2023 (IMCCRT-2023) was successfully held on 6th – 7th January 2023. The aim objective of “The Seven Virtual International Multidisciplinary Conference on Current Research Trends-2023 (7thIMCCRT-2023)” was to bring leading academicians, researchers, scholars as well as industrial professionals together from all over the world to exchange and share their experiences and research results about all aspects of biological and chemical sciences and to discuss the practical challenges encountered and the solutions adopted. In this context, we welcomed precious scientists and the greatest appreciation goes to all participants whose contributions have made this conference a success. I would like to thank the organizing committee, the scientific board and conference secretariat providing this intense and quality scientific environment embracing biological and chemical sciences. I believe that the The Virtual International Multidisciplinary Conference on Current Research Trends-2023(IMCCRT-2023) has made important contributions to you at large and hope to see you at the Upcoming Virtual International Multidisciplinary Conference on Current Research Trends-2023 (IMCCRT-2023).

Dr. Hishan S. Sanil
Managing Editor
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2	Dr. Sahil Thakar	NOMOPHOBIA: Next Epidemic to Afflict us?

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Driving Competitive Advantage in Luxury Fashion Accessories: A Case Study of BACHI Barcelona's Cost Leadership, Differentiation, and Focus Strategies

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ABSTRACT: This report presents a comprehensive analysis of BACHI Barcelona, a Spanish luxury fashion brand, using various business management frameworks and tools. The report highlights the company's strengths and weaknesses, opportunities and threats, and proposes strategies for achieving its goals. The analysis is based on primary and secondary data, including interviews with key stakeholders, financial statements, and market research. The report covers several aspects of the company's operations, including its product design and development, supply chain management, marketing, and financial performance. The report also discusses the relevance of Michael Porter's strategies in the context of BACHI Barcelona and proposes recommendations for future growth. Overall, this report provides valuable insights into the luxury fashion industry and serves as a reference for other businesses operating in this sector.

KEYWORDS: Luxury Fashion Brand, Competitive Advantage, Supply Chain Management, Marketing Strategy, Balanced Scorecard.

Internet Usage and Psychological Wellbeing among Undergraduate Students

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ABSTRACT: In this present scenario, internet has become an indispensable part of human life and growing explosively in the globe. It has noticeably changed the existing communication process and there has been a huge increase in the number of internet users worldwide in the last decade. On the other hand, with availability and mobility of new media, excessive internet use has emerged as a potential problem in young people that interferes with their daily life. This study was conducted to investigate prevalence of internet usage in relation to psychological wellbeing among rural and urban undergraduate students. This study was conducted on 320 undergraduate students selected through random sampling method from colleges affiliated to Punjabi University Patiala. Data was collected through self-structured and standardized internet usage scale (35 items on 5 point Likert scale) and psychological wellbeing scale developed by Dr. Davinder Singh Sisodia and Ms. Pooja Choudhary (2012) comprising of 50 statements. The descriptive statistics such as mean, standard deviation and two way analysis of variance were used to analyze data. Findings of the study revealed that there was no significant difference in internet usage among undergraduate students in relation to their location. Internet usage was high among undergraduate students with high level of psychological wellbeing, but they did not differ significantly. Moreover, no significant interaction effect of psychological wellbeing and location of undergraduate students was found on internet usage.

KEYWORDS: Internet Usage, Psychological Wellbeing, Rural Undergraduate Students, Urban Undergraduate Students

Effect of Parenting Style in Increasing Patterns of Nomophobia Behavioural Pattern in Childrens

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ABSTRACT: The widely spread dependence on smartphones by children, adolescents, and adults has shoved researchers to assess its impact on the wellbeing of individuals. Nomophobia, the fear of being out of cellular contact, was typically assessed by self-report measures or proxy measures in adolescents and older adults. The prevalence of smartphone addiction among adolescents and adults has led researchers to investigate the impact of smartphones on personal well-being. Nomophobia literally means "no mobile phone phobia". Fear of not being able to connect to mobile phones. The trend toward mobile phone dependence and high reliability is one of the key trends to sustain the dynamic growth of mobile phone sales. This pattern of nomophobia most affects adolescents, who are most common in the 14 to 16 years age group. Having your mobile phone connected to the internet is one of the causes of nomophobia. Symptoms of addiction can be the result of a need for comfort due to factors. Parents play an important role in a child's development because each parenting method and style is different and shapes their behaviour. There are four parenting styles: authoritative parenting, authoritarian parenting, permissive parenting style, and loose parenting style. Parenting type may contribute to academic performance and motivation. Children raised by authoritarian, permissive, or uninvolved parents are more likely to suffer from anxiety, depression, and other mental health problems. The main hypotheses are: Good parenting styles reduce the likelihood of nomophobia behaviour patterns. Research nomophobia in children. There, we administered Nomophobia Questionnaire [NMP-Q] and Perceived Parenting Style Scale to 150 children and parents under the age of 17 years. Based on simple linear regression statistical analysis, we can conclude that nomophobia in children influenced by permissive parenting styles. Our future recommendation is permissive parents who do not control or regulate their children's behaviour.

Self-Care Practices and Knowledges on Menstrual Hygiene Management among Adolescent girls

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ABSTRACT: Menstrual hygiene management (MHM) is an essential aspect of hygiene for women and adolescent girls between menarche and menopause. Menstruation cycle is treated as something dirty, impure and contaminating. Girls and women are alienated from society as well as their friends and families during this time of the month. They are forced into harmful social restriction and have to face inhuman condition and humiliation. The objective of the study was to measure the knowledge and self care practices of adolescents on menstrual hygiene. Mixed method of qualitative and quantitative study designed to assess the knowledge attitude and self care practices, social cultural practices food taboos during menstrual hygiene among adolescent girls of urban area in Janapath School. Semi structured open ended questionnaire along with likert scale and indepth interviews were done among selected students on the basis of scoring of likert scale, focusing on socio-cultural practices, food beliefs and practices and feelings and emotions during menstruation. Interview was accompanied by concurrent note taking in Nepali language which was later translated to English. The code book was generated and thematic data analysis was conducted. The result showed that 19.72% students need improvement in attitude towards menstruation. Menstruation is taken as secretive and indiscriminate management practices. During menstruation 83.09 % of students used old and used cloths as absorbent and 46.5 % disposed their used pad by throwing it with other waste. Change of pad depending upon their bleeding was practiced by 54.9% of the student. More than half of the student i.e. 60.6% student don't take bath everyday during their periods. Even-though all adolescents have facilities of toilet but they are still facing problem of water which, is a great obstacle for them to maintain their menstrual hygiene. Sociocultural rituals of menstrual cycle is hampering the self-esteem of the girls student, for which there is need to focus interventional study and MHM programs that suitably address the problems of the adolescent girls.

Effectiveness of Electronic Performance Management E-Pm Practices in Garden Silk Mills Pvt. Ltd.

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ABSTRACT: This Paper aims to explore A set of technologies adoption in organization for Electronic Performance Management in Textile industries of Garden Silk Mills, Surat Gujarat. Organization can use several. Applicable software to improve their performance in all Line department's of the organization. The aim of this study to reduced the time as resource and effective utilization of resources. This software can provide competitive advantage to the company which creates higher market value & operational excellence in organization.

Automatic Wireless Health Monitoring System Using GPS Tracking System

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ABSTRACT: Nowadays people need health care in these crucial situations like covid-19, omicron. Many of the people are busy with their personal life's and no one are caring about their other persons. Old age people or disabled persons not able to consult doctor in the present situations because hospitals with huge crowd and they are unable to travel long distances. We are introducing a system which help all the humans for general check-up of a body and the people are under the doctor's observation which may easily resolved in the small change of the health conditions. The doctors mostly suggest the heart patients to exercise daily for the increase their pulse rate and heart rate from the readings of their heartbeat doctors observe the improvement of patient's health. The athletes also required these measurements on their daily practices and warmups to know the their heart rate, oxygen levels and moments of the body. The devices which are assembled in the system are max30102 sensor, Vibration sensor, temperature sensor, GPS, and GSM. All these devices working together made our health safe and stay healthy. Firstly, the patient must wear this system and it will detect the temperature, heartbeat, vibrations and oxygen levels in subject's body. After that Arduino Atmega2560p will automatically detect the parameters and display on the LCD screen. If the heartbeat, temperature vibrations and oxygen levels is beyond normal ranges automatically Gsm module will activate and sends an alert message to the users (one or more users can connect to module). By using GPS module, we can track the location of the patient by dispatching the vehicle or ambulance rescue the patient from death.

An Overview and Future Reflection of Battery Management Systems in Electric Vehicles

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ABSTRACT: Researchers are becoming more interested in electric vehicle (EV) because it assist to minimise greenhouse impacts, reduce noise and air pollution, and provide freedom from fossil fuels. Electric vehicles depend on their batteries to safely supply the necessary power. The duration of time needed to charge the electric batteries is the biggest drawback of modern electric vehicles. Significant progress has been achieved in recent years to manage energy storage and speed up the charging process for electric vehicle batteries. In order to reduce energy consumption, boost system efficiency, lengthen battery life, and create a clean, efficient transportation system, it is crucial to build a battery management system that ensures long product life and a safe driving experience. This article attempts to provide a concise overview of various important battery management system features, including battery charging optimization, temperature control, and cell voltage balancing. The conclusion and recommendation of the article highlight the potential for further study in the area of electric vehicles.

KEYWORDS: Battery-Management System (BMS), Battery Charging Optimization, Managing Thermal Temperature, Cell Voltage Balance

The Influence of Profitability, Solvency, and Sales Growth on Profit Quality

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ABSTRACT: This study aims to determine the influence of profitability, solvency and sales growth on earnings quality in pharmaceutical industry companies for the 2016-2020 period. The research method used is quantitative method with associative descriptive research type. Sampling using purposive sampling with a sample of 8 companies and 5 years of observation so that the data obtained is 40 data. The data used are secondary data obtained from the annual reports of the companies selected as samples. Data analysis used multiple linear regression. The results partially show that profitability has a positive effect on earnings quality, solvency has no effect on earnings quality, and sales growth has a significant negative effect on earnings quality. Simultaneously, profitability, solvency, and sales growth have a significant positive effect on earnings quality.

KEYWORDS: Profitability, Solvency, Sales Growth, Earnings Quality

Flood Forecasting, Detection and Monitoring System Using IOT

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ABSTRACT: Flooding is the most frequent natural catastrophe that has an impact on humans. There has a history of widespread devastation from floods. The organisations and competent authorities use a variety of sophisticated techniques to track the flood level in areas with a high risk of flooding. The majority of these gadgets are quite expensive to use and maintain. In the proposed system, data from sensors including those measuring temperature, humidity, water level, water flow, and ultrasonic sensor can be sent to the cloud using an IOT device. If environmental condition threshold values rise, a warningmessage will be sent to the relevant authorities, who will then inform the residents of the flood-prone area. A method like this helps both government and commercial entities to work on issues prior to the flood scenario getting worse.

A Hidden Markov Model and Internet of Things Hybrid Based Smart Women Safety Device

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ABSTRACT: In the past few decades, smart technologies for women's safety have been increasingly popular. Scientists throughout the world were aroused to create intelligent apps for women protection by a number of criminal treatments of women that offended the entire nation. The concept of a multimodal security paradigm for women facing potential offensive threats from deep sensing technologies is proposed in this research. A platform built on the Internet of Things (IOT) offers flexibility and agility in coordinating a wide range of sensors and actuators to secure the safety of women. Due to their dynamic probabilistic character, Hidden Markov Models (HMM) allow for improved predictive analysis. They also helped us develop a dense sensing technique based on indications of questionable behaviour. There is a situationbased approach for relative modelling that makes use of both facial recognition and verbal dialogue labelling. With an accuracy of 94.7%, the testing results looked very promising. They also assisted us in creating a dense sensing strategy based on evidence of shady activity. There is a situation-based analysis for relative modelling that uses both verbal conversation labelling and face recognition. The results of experimentations proved to be really promising with an accuracy of 94.7%.

Statistical Model in Predicting Traffic Road Congestion among Selected Routes in Metro Manila

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ABSTRACT: Traffic congestion is a serious issue that contributes significantly to economic loss, increase in greenhouse gas emissions, and fuel wastage. Hence, an accurate congestion prediction model can help address these problems. This paper analyzes the status of the road transport infrastructure, public transportation system, volume of vehicles, road crash data, and government policies, rules, and regulations, as well as the quality of implementation. Moreover, traffic congestion prediction models were developed, using logistic regression, random forest, and neural networks. Seventeen months of daily traffic data were used in developing the models. Results showed that the Random Forest models have recorded the highest accuracy (77%), recall (77%) and F1-score (77%). On the other hand, the Neural Network model has better performance in predicting Free Flow traffic congestion at 81% F1-score, while the Random Forest model showed better results in predicting Moderate, Heavy, and Standstill Traffic.

KEYWORDS: Traffic Congestion Prediction Models, Logistic Regression, Random Forest, Neural Networks, Traffic Data

Deep Learning and Lexicon Analysis for E-Commerce Product Ranking through Sentiment Analysis

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ABSTRACT: Online shopping become a fashionable thing in the modern era. People like to go behind the technology even to buy and sell their product through online mode without physical contact. In our proposed work, we combine two algorithms on the dataset available to get the best result in the e-commerce field. Sentiment analysis of a huge number of user reviews on e-commerce boards can efficiently improve user fulfilment. New sentiment lexicon is used to improve the sentiment structures in the evaluations and Extended Gated Recurrent Unit (EGRU) network is used to mine the main sentiment structures and context features in the evaluate and use the attention tool to load. The experimental statuses show that the model can effectively increase the performance of text sentiment analysis and forecasting performance sorting results.

Comparative Analysis of Formulated Feeds from Moringa Leaf (*Moringa Oleifera*) and Collard greens (*Brassica Oleracea*) to Commercialized Feeds for Chicken (*Gallus Gallus Domesticus*)

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ABSTRACT: This study compared the effectiveness of formulated feeds from moringa leaf (*Moringa oleifera*) and collard greens (*Brassica oleracea*) to commercialized feeds for chicken (*Gallus gallus domesticus*). Formulation of the feeds is at 50% of moringa leaf and 30% of collard greens. It sought to attain the following objectives: (1) Determine the level of effectiveness of formulated feeds from moringa leaf and collard greens compared to commercialized feeds for chicken. In terms of height, weight and mortality rate of chickens; (2) Determine the degree of acceptability of formulated feeds from moringa leaf and collard greens in terms of growth performance for chickens against commercialized feeds; (3) Compare the significant difference in the level of effectiveness of formulated feeds from moringa leaf and collard greens to commercialized feeds. The data of the study were obtained through a comparative-developmental method. To analyze the gathered data, statistical treatment used was T-test. Commercialized feeds were bought from poultry feeds store. Moringa leaf (*Moringa oleifera*) to be formulated were washed with water and air-dried for two weeks. Collard greens (*Brassica oleracea*) were air-dried for two weeks, pulverized and transferred for feed pellet formulation. Chickens (*Gallus gallus domesticus*) were bought from poultry farmers, ten chickens were used to determine which feeds has the good impact. Chicken showing weaknesses and strengths were recorded on matrix form of observation for forty-five days. Findings revealed that formulated feeds was noted as highly acceptable for chickens' height, poorly acceptable for mortality rate, and fairly acceptable for the weight of chickens. However, commercialized feeds was the most effective compared to the formulated feeds in terms of weight and mortality rate. This signified that the moringa leaf and collard greens could be cheaper alternative for feed production since it is locally abundant.

KEYWORDS: Comparative Analysis, Commercialized Feeds, Formulated Feeds

Molluscicidal Activity of Madre De Cacao (Gliricidia Sepium) Extract against Golden Apple Snail (Pomacea Canaliculata)

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ABSTRACT: This study aimed to investigate the effectiveness of different concentration of Madre de cacao extract as a natural molluscicide against the Golden apple snail, which is common pest that causes significant language to rice fields and other crops. The study tested the four different concentrations of the extract (25%, 50%, 75% and 90%). It aimed to accomplished the following objectives: (1) Assess the level of effectiveness of Madre de cacao (G. sepium) extract against Golden apple snail (P. canaliculate); (2) Identify the most effective concentration of Madre de cacao extract; and (3) Assess the effectiveness of pure high, medium, and low concentration of Madre de cacao extract against golden apple snail. The information for this research was acquired by conducting an experiment. The collected data was analyzed using a statistical method called analysis of variance, which employed a completely randomized design. To prepare the madre de cacao leaves for the experiment, they were aired dried for two weeks, ground into powder, and soaked in water for 24 hours. The madre de cacao leaves were rinsed with the top water before being utilized in the experiment. The extract was applied a varying concentration, that all concentrations were applied simultaneously. The study evaluated the effects of madre de cacao on the golden apple snail, and the observation were recorded on a matrix for 3 days. The result indicated that the concentration of Madre de cacao extract at 90% was the most effective compared to the other concentrations. This findings suggest that the 90% concentration of madre de cacao extract could serves as an alternative pesticide against golden apple snail.

KEYWORDS: Golden apple snail, Madre de cacao, Molluscicidal Activity

Making Briquettes Charcoal (Noir De Lampe) using Water Lily (Eichornia Crassipes) and Bana Grass (Pennisetum Purpureum) as an Alternative WoodCharcoal

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ABSTRACT: This study examined and explored the effectiveness of water lily (Eichornia crassipes) and bana grass (Pennisetum purpureum) as an alternative wood charcoal. It sought to attain the following objectives: (1) determine the level of acceptability of water lily and bana grass as a briquettes charcoal, (2) determine the level of effectiveness of briquettes charcoal as an alternative wood charcoal; and (3) evaluate the effectiveness of each treatments as an alternative for wood charcoal. This study used evaluativeexperimental method to analyze the gathered data, the statistical treatment used was Analysis of Variance. Dried water lily and bana grass was burned. A solution containing of molasses was used in the production of briquettes having different water lily-bana grassmolasses ratio (36:24:24), (24:36:24) and (24:24:36). The process of the study was drying of water lilies (E. crassipes) and bana grass (P. purpureum). Preparation of water lily-bana grass-molasses blend using different ratios, briquetting and drying, testing its burning rate and ignition time. Findings revealed that all treatments is effective as an alternative for wood charcoal. However, the third treatment (24:24:36) of waterlily-banagrass-molasses is not effective. This signified that using water lily and bana grass can alternate the use of wood charcoal to minimize deforestation.

KEYWORDS:Briquettes Charcoal, Water Lily and Bana Grass.

Effectiveness of Oregano (*Origanum vulgare*) and Garlic (*Allium sativum*) Extract as a Natural Spray Repellent against Mosquito (*Culicidae pipiens*)

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ABSTRACT: This research focused at and investigate, three (3) different formulations of oregano and garlic extract were tested for their efficacy as a natural spray repellent. The formulation one (1) contained 40% oregano, 40% garlic extract, and 20% distilled water. Formulation two (2) contains 10% distilled water, 45% oregano extract, and 45% garlic extract. Formula 3 contains an extract made of 50% oregano and 50% garlic. It sought to attain the following objectives: (1) Which formulation of oregano and garlic extract as a natural spray repellent against mosquito? (2) What is the level of effectiveness of oregano and garlic extract as a natural spray repellent against mosquito? (3) What significant level of time does the repellent effect on the mosquito?. The data of the study were obtained through an experimental – evaluative method. To analyze and gathered data, statistical treatment used was Analysis of Variance using Completely Randomized. Experiment were observed in three (3) different level of formulation. Researchers crushed the oregano and garlic and extract taken. Experiment was conducted in one (1) day observation at 8:00 pm – 9:30 pm to determine which formulation is the most effective. Findings revealed that formulation made of 50% oregano and 50% garlic extract was the most effective among other formulation. This signified that the oregano and garlic extract as a natural spray repellent could be cheaper substitute to chemical mosquito repellent.

KEYWORDS: Oregano, Garlic, and Mosquito.

Granular Bioorganic Chicken Manure and Banana Peel (*Musa Paradisiaca*): an Alternative to Complete Fertilizer (14-14-14) For Rice Production

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ABSTRACT: This study explored the prospect of granular bioorganic chicken manure and banana peel (*Musa paradisiaca*) as an alternative to complete fertilizer (14-14-14) for rice production. It sought to attain the following objectives: (1) determine the level of effectiveness of granular chicken manure and banana peel mixture as an alternative fertilizer for rice production; (2) create a comparative analysis between the yields produced with the alternative fertilizer and complete fertilizer (14-14-14); and (3) assess the advantages, disadvantages, and effects of the organic fertilizer application on rice cultivation through observations. The data for the study were obtained through an experimental-evaluative method. To analyze the gathered data, descriptive statistics were used, specifically the measure of central tendency (MCT) using the mean and percentage of the sample and the measure of variability (MOV) using range. The chicken manure (CM) was air-dried for eight months, while the banana peel (BP) was stripped and solar-dried for three to five days. These were applied in different treatments: (T1) no application (pure application of complete fertilizer (CF)); (T2) a mixture of 1.225 kilograms (kg) of CM and 0.5 kg of BP applied with 50% of the CF in T1; (T3) a mixture of 2.45 kg of CM and 1 kg of BP; and (T4) a mixture of 3.675 kg of CM and 1.5 kg of BP. Considering the average height, rate of growth, and rate of water absorption, the results revealed that the treatment with an application of both organic fertilizer and complete fertilizer generated the highest level of effectiveness compared to the treatments with a pure application of either complete or organic fertilizer. However, when it comes to product yields, the treatment that had the highest product yield and number of panicle initiations during the reproductive phase was T3, the treatment with a standard application of organic fertilizer. Nonetheless, these implied that the mixture of chicken manure and banana peel could be an economical alternative to complete fertilizer for rice production.

KEYWORDS: Chicken Manure, Banana Peel, Complete Fertilizer, Rice Production

Modeling the Performance of Polymer Electrolyte Membrane Fuel Cells and the Challenges Involved: A Review

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ABSTRACT: Renewable and sustainable energy sources are being demanded more by the energy sector. The Polymer Electrolyte Membrane Fuel Cell (PEMFC) is an effective technique to produce power because it produces nearly minimal pollutants. PEMFC produces electrical energy and water as a byproduct by combining hydrogen and oxygen on the anode and cathode sides. The state of the art in simulation and performance modeling of polymer electrolyte membrane fuel cells is presented in this chapter. The commercialization of fuel cells and their deployment in the transportation, industry, encounter numerous challenges. Water control, heat management, cost reduction, and increased cell reliability are the main issues hindering commercial viability of fuel cells. Several models ranging from simple one dimensional single phase models to complex three dimensional multiphase models on computational fluid dynamics platform are available in literature. This chapter provides an overview of some important realistic models as well as a comparison of them. The difficulties that fuel cell-based systems encounter are also explored. Any urban energy system must meet the demand side of the population while also guaranteeing reliable and efficient energy output. PEMFCs are also being explored as a forthcoming sustainable energy source. This chapter also covers the economic evaluation of fuel cell-based power generation systems.

KEYWORDS: Urban Energy System, PEMFC, Performance modeling, Fuel cells

Achievement in Mathematics among School Students in Relation to their Self-Efficacy and Intelligence

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ABSTRACT: Mathematics is necessary for people of all ages to be successful in life. Mathematics is the backbone of students, particularly senior secondary school students. It is also true that achievement in Mathematics is influenced by a range of factors, especially, intelligence and self-efficacy. The purpose of this study is to identify how intelligence and self-efficacy act as correlates of achievement in mathematics of senior secondary school students. The sample consisted of 200 senior secondary students studying in class XI in government and private schools of Sangrur district of Punjab. The findings of the study are: mathematics achievement is not differentiated with the different levels of intelligence in mathematics and mathematics achievement is not also differentiated with the different levels of self-efficacy. Mathematical achievement had no significant relation with intelligence and self efficiency

KEYWORDS: Mathematics Achievement, Senior Secondary ,Intelligence, Self-Efficacy.

“The Bignetti Model” and our Virtual Life

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ABSTRACT: Most people believe that the conscious mind might host a free will-possessing Self (or Ego-FW); this idea is so persistent and deep-rooted in the mind that they believe to decide their voluntary actions, without the control of God, fate, or circumstances. Conversely, we have first the scientific evidence that Ego-FW is an illusion of the mind rising very early in life; second, we know that our sensory organs give us a very limited and somehow distorted perception of the world around us. Then, the intriguing question is: “how might people elaborate cognitive processes and behavior at will?” To give an answer, one should first consider that: 1) Cognition exhibits hyperbolic learning curves that statistically correlate the prior experience with the posterior effect, 2) The brain is a computational machine with a probabilistic-deterministic behavior, 3) The mind is genetically installed in the brain with a self-oriented, cognitive, autopoietic purpose; to this aim, it exhibits two functional states: the Unconscious (Implicit) Mind (UM) (whose language is made of biophysical and biochemical signals) and the Conscious (Explicit) Mind (CM) (whose thinking process utilizes a mother tongue language), 4) CM exhibits either the 1st-person perspective (1PP) (typical of the subject who is emotionally involved in voluntary actions) or the 3rd-person perspective (3PP) (typical of an emotionally-detached observer of them). Then, we have proposed “The Bignetti Model” (TBM) is a human cognitive model giving a rational response to it: (action) 1) The so-called “voluntary” action is decided and performed by the agent’s UM in response to a stimulus; to this aim, the reaction paradigm that might have the best probability of success, is possibly retrieved from the long-term memory store. 2) The action sends feedback sensory signals to the brain, so that CM becomes aware of the ongoing action few milliseconds later (awareness always lags behind UM activity). (cognition) 3) Owing to this delay, CM (1PP) erroneously believes to have freely decided UM’s action; this false belief based on FW illusion, is perceived as true. 5) Due to the arousal of the “Senses of Agency and Responsibility” of the action, CM (1PP) self-attributes either reward or blame depending on the action outcome, 6) Both reward and blame are motivational incentives fostering the long-term memory (LTM) updating, i.e. a step that will be useful for further UM action (restart from 1). According to TBM, CM (1PP) believes to act in place of UM as the Avatar in a virtual game.

KEYWORDS: The Bignetti Model (TBM), Free Will (FW), Conscious Mind (CM), Unconscious Mind (UM), 1st-Person Perspective (1PP), 3rd-Person Perspective (3PP). Long Term Memory (LTM).

Analysis of the Causes and Impacts of Water Pollution of River Rispana: A Critical Study.

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ABSTRACT: When water becomes a home of unwanted elements, it becomes contaminated and is considered harmful for human as well as aquatic lives. This water is known as polluted water and in long term, often this water becomes unfit for any use. There are many reasons behind the pollution of water, Some natural causes are siltation by erosion of river banks, runoff from hilly terrains, etc. Domestic waste, untreated industrial waste, fertilizers, etc are the man-made pollutants in the water. The current scenario of surface and groundwater pollution in India is alarming, especially since River Ganga is largely polluted by adjacent cities and due to other river tributaries joining River Ganga. One such river is River Rispana, passing through the capital city of Uttarakhand state and joining River Ganga at Rishikesh city. This research, informed by descriptive interpretive methodology, employed semi-structured interviews to investigate the experience of people in their thirties and forties. The interviews included the use of a metaphor question and this usage in descriptive interpretive interviews will be discussed further. The objectives of this study are to identify the causes of water pollution of Rispana River, to know the current state of water along the Rispana river system, to know impacts of water pollution of Rispana River. The necessity of water for every living being needs no description. Everyone intakes water directly or indirectly for physiological activities. If this water is untreated or polluted, then it will do harm for sure. The worst part is, that this bad impact transports everyone through the food chain. Thus, we must be aware of the adverse impacts of polluted water on the humble environment and the least we can do is the minimization of these impacts and the pollutants causing the same.

KEYWORDS: Wastewater, Water Quality Parameters, Environment, Pollution, Human Health, Rivers OfIndia, River Rispana.

Nonlinear Seismic Response Analysis of Concrete Gravity Dams Considering Soil-Structure Interaction

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ABSTRACT: The stability analysis of the dams subjected to seismic loads is really very complex. One of the most important problems in evaluation of seismic behavior of concrete gravity dams is soil-structure interaction phenomenon. In this paper, we study the effect of soil-structure interaction (SSI) on seismic response of concrete gravity dams. For this purpose, two finite element models using ANSYS software are generated. The first model represents the dam alone, which is fixed at its bottom base (model without SSI). The second model illustrates the dam-foundation rock coupled system (model with SSI). Oued Fodda concrete gravity dam, located in the north-west of Algeria, is chosen in the present study. The Drucker-Prager model is considered in the nonlinear analysis for concrete of dam body. Reservoir water is modeled using Westergaard approach. According to finite element analysis, numerical results show that taking into account of soil-structure interaction phenomenon increase more displacements and stresses in the dam body. Therefore, it is becomes imperative to carry out the soil-structure interaction analysis for massive structures such as concrete dams in order to evaluate their stability.

KEYWORDS: Concrete Gravity Dam, Dynamic Soil-Structure Interaction, Finite Element Method, Nonlinear Seismic Response.

Design of Ventilated Seat of Two Wheeler

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ABSTRACT: A ventilated seat is a type of seat that incorporates a ventilation system to provide cool air flow to the occupant. Ventilated seats are becoming popular in high end cars but to level up the comfort and reach a major no. of population using two-wheeler there is a need of ventilated seat for two wheelers. The typical system consist of cooling fans to circulate air in the system also requires heating element and temperature controller, heating element to provide warm air during cold weather . Further system also include male female pins , switches and the main item of the system seat and perforated cover . together this system is fully capable of providing thermal comfort to the rider during long rides. Main objective the project is to study whether ventilated seat for two-wheeler is a liable addition to two wheelers or not and also it can provide comfort to the occupant for which the system is created.

Hybrid Machine Learning Techniques for Sustainable Agriculture

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ABSTRACT: Agriculture plays a critical role in the Indian global economy and contributes a major part to GDP. With the expansion of the human population, it is necessary to maintain food security, it is achieved and controlled by the agricultural yield produced by the nation. The yield of a crop is mainly determined by climatic conditions like temperature, rainfall, soil conditions, and fertilizers. Due to these variable factors, the production gets affected and remains a huge problem for the agricultural sector to strengthen the need for exactness for proper analysing the crop production in variable climatic conditions. Recently, Machine learning algorithms are used by researchers to predict the yield of a crop before its actual cultivation. This proposed has proposed a Machine learning algorithm: Logistic Regression and Random Forest to enhance the yield. My project suggests a fertilizer based on the soil conditions like NPK values, soil type, soil Ph, humidity, and moisture. Fertilizer recommendation is primarily done by using the Machine learning (Random Forest) algorithm.

Design and Development of Economical 3d Printer

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ABSTRACT: The objective of this work is to focus on the optimization and fabrication of a portable 3D printer with bed volume (100 x 100 x 100 mm³) which is constructed sustainably and economically. Designing and developing an economical 3D printer requires a thorough understanding of the technology, materials, and components involved in the process. The whole printer and the software are developed to reduce the cost of printers. 3D objects are printed with the help of CAD (computer-aided design) software. 3D printing is an additive manufacturing technique. The process adopted by us is FDM technology, in which different materials like PLA (poly-lactic acid), ABS (acrylonitrile butadiene styrene), etc. By heating any of the filament material to its melting point and it is deposited layer by layer. Combination of many layers of such type will give us a final 3D model. Designing and developing an economical 3D printer requires careful consideration of the components, materials, and design. With the right approach, it is possible to create a 3D printer that is affordable, functional, and of good quality. The proposed method is part of the ongoing research and further can improve.

KEYWORDS: Additive Manufacturing, FDM, 3D Printer, Manufacturing Industry.

Integration of Remote Sensing into Forensic Investigation

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ABSTRACT: Forensic is the scientific method used to solve a crime governed by the legal standards of admissible evidence and criminal procedure. Forensic investigation is the gathering and analysis of all crime related physical evidence in order to come to a conclusion about a suspect, forensic in this research focuses on the presentation of evidence before a court of competent jurisdiction. Before the evidence can be presented to court, it has to pass through a process called chain of custody. This research is carried out in order to provide a platform for the integration of remote sensing into forensic investigation by focusing on evidence found in crime scene and geodetic data relating to the evidence.

Integration of remote sensing into forensic investigation is done using ArcGIS for geo-referencing and geo-coding, Microsoft Excel used for transporting data collected into ArcGIS and Garmin eTrex 10 GPS as a remote sensing device used to take coordinates. The system focuses on keeping track of chain of custody of evidence, keeping detail records regarding the evidence and location in which evidence were found, location through which evidence passes through (Chain of custody), geo-referencing of a map to show the whole area under consideration and geo-coding of the map with the geodetic data collected through the remote sensing device.

This study reveals that integration of thematic map of region under consideration gives adequate description and location of the evidence and chain of custody and further present firsthand information to local authorities, forensic investigators and jury about the chain of custody.

Grievance Management System Using Mobile Application

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ABSTRACT: An important indicator of an organization's performance is a prompt and efficient reaction to complaints. An Android software called Grievance Management System (GMS) offers a time saving online means of resolving complaints made by an organization's faculty and students. It was challenging for the current management system to handle all the concerns. In the past, complaints were dealt with manually. Paper complaints were placed in a box, collected, and then dealt with. It is crucial in the digital age to solve issues via mobile apps, which is a digital method. And the Grievance Management System will achieve this objective by putting in place the mobile app complaint redressal service. Android-based Grievance Management is a tracking method. API is used for implementing the Android app so that the working of the application will be smooth.

KEYWORDS: Mobile application, Android, Grievance management, Digital Way, API(Application Programming Interface), Time Saving

Campus Recruitment Management System

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ABSTRACT: “Campus Recruitment Management System” is a student/company information system which developed for Placement cell in college for storing and retrieving the information of students who are registered in Placement Cell. The Placement Cell maintains a large database of students wherein all the information of students including personal records and the academic performance in terms C.P.I. is stored and company information including profile of company, eligibility criteria and facilities it provides etc. The software retrieves this data and displays as per the user requirement. The system provides the facility of viewing both the personal and academic information of the student and company. Company can post vacancy and students can apply if they are eligible. Company can view the applications and can accept or reject them. The users access easily to this and the data can be retrieved easily in no time. Company can send message to students regarding the application. The students can register themselves online and apply for job. Online Recruitment Management System provides online help to the users. Using web recruitment systems like recruitment websites or jobsites also play a role in simplifying the recruitment process. It has facilities where prospective candidates can upload their CV's, skills etc and apply for jobs suited to them. It also makes it possible for recruiters and companies to post their staffing requirements and view profiles of interested candidates. Email is integrated such that the users can reset their password if they lost it. The company is to verified by the admin to post the vacancy and hire the students. The recruitment application designed to do a whole lot more than just reduce paperwork. The admin can know the status of students whether they are placed or not. The motto of this website is to serve as a common platform for students, placement officer and recruiters, where the students find jobs and recruiters can find the right candidate as per requirements and placement officer can monitor and know the status of students.

A Review Paper on Fake News Detection Methods on Social Media

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ABSTRACT: The internet is an important invention. Many people use it for different purposes. Social media platforms are available to anyone, without verification or confirmation. This enables some users to spread false information via these websites, hurting a specific person, group of people, institution, or political party. Some social media sites, including Facebook, Instagram, and Twitter, were impacted by false information spread by their users. Unfortunately, some individuals propagate bogus news in the form of words, photographs, and videos to increase their links and reputation. Both humans and machines are incapable of identifying all of this bogus news. Therefore, machine learning classifiers are required to automatically identify this bogus news. For this reason, it is necessary to recognize this information as fraudulent using machine learning methods. This article offered a thorough literature review on the application of machine learning classifiers for identifying false news. This makes identifying this information false using machine learning techniques. The central point of the study is to review various machine learning and deep learning algorithms used to detect fake news on social media. Most of the articles proposed machine learning techniques for detection of the fake news. Machine learning algorithm has been widely used in the detection of fake news and the performance of these algorithm has been evaluated using parameter-Accuracy, precision, and recall. In this work, we looked at several papers and compared all the strategies for detecting false news.

On some Examples of Generalized Directed Association Schemes obtained through computer search

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ABSTRACT: This article deals with some examples of Generalized Directed Association Schemes which is a generalization of Coherent Configuration. Examples have been generated by computer search. Examples of Generalized Directed Association Schemes of 2nd, 3rd and 4th order up to four, four and two classes respectively have been generated. Obtained results are analyzed and conclusions have been made.

Fertilization of Russian sturgeon eggs using Siberian sturgeon spermatozoa with selected activating solutions

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ABSTRACT: The high percentage of fertilization of sturgeon eggs is very important in obtaining the majority of hatching larvae. The success of fertilization depends on the good quality of gametes and optimal activation medium. Usually, in fish farms, the hatchery water is applied for fertilization during the artificial reproduction of fish. In experimental conditions, we can test several activation solutions that were applied in many fish species. The purpose of the present study was to determine the optimal activation medium for the fertilization of Russian sturgeon eggs with Siberian sturgeon sperm.

Smart Door with AI-Enhanced Face Mask Detection

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ABSTRACT: Health plays a big part in everyone's lives, especially in current pandemic circumstances. Many individuals are unaware of how to protect themselves against this pandemic catastrophe. Regular mask wear is crucial for both our own protection and that of others. Due to their ignorance, visitors won't use masks, which may have an adverse effect on others. Individuals might not be aware if someone has visited their house while they are away. This study proposes an AI-based project that determines whether a mask is being worn and issues a warning message. If someone is wearing a mask, this smart gadget unlocks the door automatically. This functions day and night. When someone tries to enter without a mask, the buzzer will begin to sound. In public spaces like malls, shops, temples, etc., smart gadgets are highly helpful.

Anomaly Detection in Data using Artificial Neural Networks

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ABSTRACT: The social network plays a crucial role in our life. Users interact with their friends with the help of social networks sites or media. These sites have made a major change in the way we pursue our social life. Making friends and keeping in contact with them and their updates has become easier. But with this growth, many problems like fake profiles, online impersonation have also grown. There are no exact solutions exist to control these problems. They share their personal and public information using these social networks. This popularity causes problem to the social networks because of fake profiles. These fake users gather the personal information and spread fake news in the social networks. In the first quarter of 2022, Facebook took action on 1.6 billion fake accounts, down from 1.7 billion in the previous year. To overcome these fake profiles we propose machine learning techniques such as Neural Networks, NLP and Classification for detecting the fake accounts. In this we classify the data using machine learning tools, which identifies the fake accounts.

KEYWORDS: Social Media, Fake Profiles, Fake News, Neural Networks, NLP

“E-Car Mechanicz” Mobile Application for Mechanic and Fuel Services

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ABSTRACT: When travelling from one place to another and worried about breakdown of your vehicle. Or having problem with communication then you run out of fuel and have no idea what to do next. The proposed system will help you deliver the fuel to your location. In case of requested mechanical help then required help will be provided at your location. The application would provide basic services for flat tyres, and mechanic help such as fixing starting problems, stepney change, battery jumpstart for two / four wheelers. All the process is carried right in front of the customer so as to maintain the transparency and gain the confidence of the customer. Best thing is that you can have your service 24/7.

KEYWORDS: Service Requests (Mechanical, Fuel), 24/7 Service, Navigation, AndroidApplication.

Faculty Portal System

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ABSTRACT: The main conceptual idea of the Faculty Portal System is based on a web application that specifies the faculty details and performance. It is used to maintain faculty activities like Publications it includes Conferences Papers, Journals Papers, Patents, Book Chapters and Books, Faculty attended events like seminars, Workshops, FDPs, STTPs., academic work, Certification courses, counselling information about students and Daily Class work etc. In prior days managing faculty details, a schedule was entirely based on manual effort i.e., Maintaining the data in Books and it is a time-consuming process. The core idea of this project is to generate the monthly report of a faculty and giving aggregated results to the HOD. This application will be used by all faculty. Our Project is to automate the existing manual systems with the help of Web Development Technologies such as HTML, CSS, JavaScript for front-end and PHP, SQL for back-end using MVC architecture. By Using these Technologies their valuable data can be stored for a longer period with easy accessing and easy to managing with it. Faculty Portal System can lead to an error free and reliable. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus, it will help organizations in better utilization of resources. The organization can maintain computerized records without redundant entries. More efficient information's will be achieved through this system.

KEYWORDS: Information System, Publications, MVC, Patents.

Green Port Transition on Indonesia: Stakeholders Approach

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ABSTRACT: The green concept is one way to develop and manage business ports to reduce environmental damage. This is in line with SDG's 13th goal, which is to take fast action to tackle climate change. As part of the transportation system, ports can play an important role in regional economic development. But on the other hand, ports also explain environmental pollution through maritime transportation activities, which presents new challenges for port managers regarding the provision of efficient port services to reduce environmental problems. South Lampung has an international port as a gateway to the economy of Sumatra Island, one of which is the activity at Panjang Port which makes a significant contribution to the city's revenue. During the period from 2000 to 2004, the value-added contribution of the port was up to 2.5 percent of the total PDRB of Bandarlampung City. Green port is the latest trend in contemporary port development, which conveys an important change in human ideas. Green port is a port that is comprehensive and integrated in terms of social, economic, cultural, environmental and other factors. PT. Pelindo II Long Branch since 2019 has tried ways or methods of improving itself towards a green port by providing supporting infrastructure. But until 2022 the port is still not completely green. One of the reasons why this green concept has not been achieved is from the aspect of roles between actors, so it needs to be studied from the point of view of the relationship between actors in the transformation towards a green port. The data needed is primary and secondary data with a stakeholder method approach. This analysis method is to find out the main and key stakeholders in port development. The result encountered is that the relationship between actors does not yet have clear tasks and functions so that the transformation does not run optimally. The recommendation offered is a special reorganization of green ports in the Indonesian context.

KEYWORDS: Green Port, Sustainability Transitions, Indonesia.

Enhanced Accessibility of ATM with Additional Features

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ABSTRACT: Introducing ATMs, simplified every bank customer's effort in performing bank transaction operations. It allows us to perform operations like cash-withdraw, deposit, checking bank balance and money transfer, etc. from remote areas and provides 24x7 service to the customers. ATMs have given the real meaning of virtual banking a real shape in the first place. We thought of implementing the new features to the existing ATMs that still enhance the user's experience, so we used Web Technologies to simulate the ATM mechanism and UI. This trial is to showcase the possibilities of improvising the ATM's features. We wanted to add more flexibility to the existing system and improvise the security by introducing, a single integrated card as a replacement for multiple debit cards that increases portability, users need not carry all the cards every time. We can develop a layer or an interface where users can be able to access all the banks through a single card in an ATM. We thought of introducing an interface that asks for the OTP that has been sent to the users' mobile devices after the card input has taken by this, the person who wants to perform any ATM transaction must know the PIN of each bank and must have the device that receives OTP which provides us more security (even if you lose your card, without OTP, no one can perform an ATM operation). After validation of OTP user will be redirected to the list of banks page where the user can see all the banks that are linked to his mobile number. And also user will be notified of the unavailability of servers, no. of free transactions left, and the daily transaction limit, which gives the user additional information that could assist him and can save his time. In order to maintain the confidentiality of users' data, we used the AES encryption algorithm to store the encrypted data in the database and made the original(decrypted) data available only for authorized people (customers and admin in our case). Since Firebase (NoSQL) is used, the application will be more scalable and provides high performance. The motto of the is this project is to bring out all the possibilities of improving current ATM systems.

To study the change in structural and optical properties with dopant concentration of CuO in Alumina nano structured materials

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ABSTRACT: Nano sized Al₂O₃ and Cu doped Al₂O₃ nano-sized particles have been synthesized by using microwave assisted chemical co-precipitation method. The structural, morphological and optical band gap energy of the calcined samples have been examined by using X-ray diffraction techniques, FESEM, HR-TEM and UV-Vis absorption respectively. The insertion of Cu²⁺ ions into Al₂O₃ NPs gave significant alteration in structural and morphological properties. The Crystalline sizes of Cu-doped Al₂O₃ were calculated by Debye Scherrer formula and it is approximately 21 nm. The UV absorption study shows strong absorption peak around 256 nm. The FTIR spectroscopy of calcined samples were at 530 cm⁻¹ and at 512 cm⁻¹ proving Cu²⁺ ion in Al₂O₃ lattice. The FESEM images confirmed that the samples are nanosized and more or less truncated spherical in shape.

KEYWORDS: Microwave Assisted Chemical Co-Precipitation, Al₂O₃ NSP, FESEM, FTIR and UV-Visible Spectroscopy.

Disparity in Education Expenditure and Economic Growth: An Analysis

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ABSTRACT: Education has been regarded as one of the leading determinants of economic growth since the time of Adam Smith. So, improving the education attainment of the population is an important requirement to foster development of the economy. Almost everyone knows that this country has a shockingly large number of people who lack education. In messy and fragmented mix of public and private education system, there is no effective leverage to put in place good because private sector has never shown much capacity to implement welfare programme on education. So, the expenditure directed by Government towards education sector is recognised as an important input in the education production process which would ensure better educational outcomes. Economic growth is a wider concept where education expenditure plays an important role to boost the economy. It is just like fuel to economy. So, expenditure is at most required. Here the paper tries to examine the disparity in public education expenditure and economic growth. So, study has taken 15 major Indian states by grouping into forward states and backward states. It is observed that divergent growth performance of developed and backward region has been widening of regional disparity in the country in terms of Per capita income and in terms of education expenditure it is reducing, so we can go for nexus analysis between two variables.

KEYWORDS: Economic growth, Per capita income, regional disparity

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A Study of Burnout in Relation To Gender and Marital Status among Elementary School Teachers of Punjab

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ABSTRACT: In the world of modernization, advancement and globalization etc., life is full of challenges. Everyone has come to across many stressful conditions or situations in life. Teachers who are the builder or constructor of the future nation with their powerful weapon i.e. knowledge; also physically and mentally challenging in this modern era. Role of a teacher is also changed in this modern era. A teacher needs to use a lot of energy in his daily work. Work can be at both places i.e. in classroom at school and in family. He also needs to use energy to maintain balance in his personal/ professional and family commitments. All this further leads to lot of stress to teacher. Stress further cause psychological problems such as depression and a very serious condition called burnout. Burnout is a state of extreme physical and psychological exhaustion resulting in negative mental health and feeling of helplessness and ineffectiveness. Burnout can occur when excessive workload or classroom discipline problems are unrelenting. It develops slowly over a long period of time and there is difficult to diagnose. The present study was conducted to study burnout and its dimensions viz. perceived self-efficacy, student's disruptive behaviour, collegiality and institutional climate, to compare mean scores of burnout and its dimensions viz. perceived self-efficacy, student's disruptive behaviour, collegiality and institutional climate of male and female teachers. And to compare mean scores of burnout and its dimensions viz. perceived self-efficacy, student's disruptive behaviour, collegiality and institutional climate of married and unmarried teachers. The sample of the study was comprised of 600 elementary school teachers from Barnala, Mansa, Muktsar, Ludhiana, Tarantarn and Jalandhar. Teacher's Burnout scale (2017) by Madhu Gupta and Surekha Rani was used as research tool. Descriptive statistics (Mean, SD and t test) were used for present study. The teachers were found to have average level of perceived self-efficacy, student's disruptive behaviour, collegiality and institutional climate of burnout. Both male and female teachers were found to have perceived self-efficacy, student's disruptive behaviour, collegiality and institutional climate dimension of burnout to the same extent. The rural and urban teachers were found to have burnout in student's disruptive behaviour, collegiality, institutional climate dimensions & in burnout (total) to the same extent, but in case of perceived self-efficacy dimension of burnout, the urban teachers were found to have high than rural teachers. The findings of the study will be beneficial for policy makers to understand the level of burnout among elementary school teachers in relation to gender and marital status. The results of the present study reveals the actual condition of burnout level of elementary school teachers. This results will be good for educational system of elementary schools of Punjab as well as for students and teachers.

KEYWORDS: Burnout, Physical and Psychological Exhaustion, Workload, Gender, Marital Status and Elementary School Teachers.

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Acute Myeloid Leukemia Cancer Detection Using Deep Learning

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ABSTRACT: Cancer is the second leading cause of the mortality across the globe. Approximately 10 million people are estimated to have died due to cancer disease in 2020. Thousands of people die and suffer across the world every year due to inaccuracies in the healthcare systems. One of such cancer is discussed here, named Leukemia a cancer of the body's blood-forming tissues, including the bone marrow and the lymphatic system. Accurate and early prediction of the cancer can assist healthcare professionals to devise timely to control sufferings and the risk of the mortality. In this project we propose a deep learning based detection in the health care, where we provide user's data – single slide blood cell image dataset of patients and learning algorithm (CNN) for cancer detection. In this work, convolutional neural networks were used for the diagnosis of AML. A comparison on the accuracy for a particular data set was performed by using DL techniques, for identifying the best tool for AML cancer detection. We have used Convolutional Neural Network (CNN).

Influence of Emotional Maturity and Resilience in Coping among Parents of Kids with Autism and Intellectual Disability

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ABSTRACT: Background : Coping strategies are critical in parenting phase because it involves major transition in adults life along with responsibilities. So, when reviewing the phase of parenting the special child, the adults require way more acceptance and in the need to adopt positive coping strategies as per growing demands . Aim : This study aimed to investigate the influence of emotional maturity and resilience on coping and to find the significant difference in emotional maturity, resilience and coping among parents of children with autism and intellectual disability in terms of gender, residence and nature of disability associated with their children. Materials and Methods : The final sample comprises of 246 participants who were parents of children with autism and intellectual disability who belongs to Thendral Vidyala School, Madurai and near by schools. The above mentioned samples were administered with Emotional Maturity Scale, Resilience Scale for Adults and Brief - Cope scale along with the acquisition of certain socio-demographic variables. Results : The results shows that there is significant positive relationship between variables emotional maturity and resilience. Likewise, there is an inverse relationship between emotional maturity and coping & resilience and coping. The study also suggest that there is differences in coping in terms of gender and resilience in terms of nature of disability associated with their children among parents of children with autism and intellectual disability.

KEYWORDS: Emotional Maturity, Resilience, Coping, Parents of children with autism and intellectual disability

Synthesis of Almond Gum-MEDSAH Based Hydrogels As Sustained Drug Delivery Carriers for the Delivery of Hydrocortisone Drug Use in Ulcerative Colitis

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ABSTRACT: Brief introduction: Almond gum based hydrogels were prepared by chemically induced copolymerization method and used to improve the potential of the hydrocortisone drug to treat ulcerative colitis. The anti-ulcerative action of almond gum is explored in the form of hydrogels, in present case as drug delivery system for the delivery of hydrocortisone drug to cure ulcerative colitis.

Aim/objective of the study: To synthesize almond gum- zwitterionic poly 2-(Methacryloyloxy)ethyl] dimethyl-(3-sulfopropyl)ammonium hydroxide (MEDSAH) based hydrogel by chemically induced copolymerization method. To characterize these polymers by various physical techniques such scanning electron microscopy (SEM), ¹³C nuclear magnetic resonance (NMR) spectroscopy, Fourier transform infrared (FTIR) spectroscopy, X-ray diffraction (XRD) and swelling studies. To study the in vitro release dynamics of model drugs hydrocortisone. The antioxidant activity, blood-compatibility, gel strength and mucoadhesion properties of the hydrogels were also studied.

Methodology: The synthesis was carried out by a definite concentration of monomer MEDSAH, almond gum, initiator ammonium persulphate, and crosslinker NNMBA taken in a reaction system in a water bath at 65°C for two hrs.

Findings & results: In conclusion, SEMs images showed rough surface of hydrogels, characteristics peak of C=O group present in almond gum was found by NMR present at 172.655 ppm and by FTIR present at 1736.11 ppm. The swelling of hydrogel affected by concentration of MEDSHA, hydrogels showed more swelling in pH 7.4 than in pH 2.2 buffer solution correlates to more drug release in 7.4 than in pH 2.2 buffer solution. The biomedical properties showed the mucoadhesive, antioxidant and biocompatible nature of hydrogels. The drug release was occurred through fickian mechanism in pH 7.4 buffer solution. The best fitted drug release model was First order kinetic model in pH 7.4 and pH 2.2 buffer solution. The novelty of the study: The novelty of the work is to synthesize the novel hydrogels, gum constitutes of these formulations along with hydrocortisone drug have synergic effect against ulcer and could enhance the therapeutic potential of these drug-loaded formulations to cure ulcerative colitis.

Effects of Yoga Therapy on Heart Rate Variability in Chronic Low Back Pain Patients: A Randomized Control Study.

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ABSTRACT:Introduction: Low back pain is the most common disabling health problem worldwide. Despite various modalities options available for chronic low back pain (CLBP), management is usually suboptimal or inadequate. Yoga has emerged as a potential intervention for CLBP which was supported by various randomized controlled trials, systemic reviews, meta-analyses, and clinical guidelines. Pain is an intrinsic threat and can alter the sympatho-vagal balance. Heart rate variability (HRV) is a proxy measure for vagal activity and may reflect dysfunction of autonomic balance in CLBP.

Objective: The objective of the study is to investigate the effect of yoga on heart rate variability in chronic low back pain patients.

Methods: This was a prospective randomized controlled study. One hundred seventy-one patients who met the inclusion criteria were randomized into the yoga group and control group. The yoga group was taught 60 minutes of asana and pranayama and continued practicing for 12 weeks. A control group was asked to carry on with the routine medical care consisting of analgesics and non-steroidal anti-inflammatory medication. Assessments for pain (VAS) and HRV on the first day in a pre-test and after 6 weeks and 12 weeks in a post-test were done in both groups (yoga and control groups).

Result: The yoga group showed a significant reduction in pain ($p < 0.001$) by RMANOVA. There was a significant difference in pre-post assessment within and between the groups. There was a significant increase in HF power, pNN50, and a decrease in LF power, LF/HF ratio ($p < 0.05$, RMANOVA, post-hoc analysis) within yoga groups at 6 weeks and 12 weeks.

Conclusion: The practice of yoga is more effective in reducing pain in CLBP. The result shows a significant change in HRV suggesting an increase in vagal activity compared to the control group after post-assessment.

KEYWORD: Chronic Low Back Pain; HRV; Low Back Pain; Yoga.

Design, Structural, Thermal and Contact Analysis of Single Row Deep Groove Ball Bearing

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ABSTRACT: Mechanical systems require relative motion between machine parts. Friction and wear reduce power and surface quality during relative motion. Bearings transfer load and allow relative motion between components with minimal friction. Transmission power losses heat bearings. Heat generation causes dilatation, which affects the bearing's geometry. Contact involves nonlinear state changes, electricity, and heat. This study uses finite element analysis for static, structural, transient thermal, and bearing system analysis to compare deep groove ball bearings. This work used ANSYS18 for static, thermal, and contact analysis. The SKF 6016 ball bearing is first analyzed in static structure without thermal properties. Deformation von-mises stress and bearing life are predicted. The same model is thermally analyzed with convection and internal heat generation elements. Temperature and heat flux predictions are shown. ANSYS and Hertzian theory then perform contact analysis. Simulations showed that computational values matched theoretical values. Modeling and analysis have used CREO 5.0 and ANSYS Workbench. Designing software CREO s3D is popular. ANSYS is FEA software.

KEYWORDS: Deep groove ball bearing, Finite element analysis (FEA) , Structural analysis, Thermal analysis , Contact analysis.

Design of Unmanned Landmine Detection Vehicle Using Arduino

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ABSTRACT: The concept presented in this article revolves around the idea of an economically designed UGV for the demining process. Landmine discovery is a critical area of exploration due to the high number of losses and injuries caused by landmines each time. The developed technology generally involved human assistance nearby for landmine detection. Every so often the military bear loss of their equipment specialists. Also, false detection leads to the wastage of resources invested in the technology. Our prime aim is to develop a sturdy design for UGV which require minimum assembly time i.e., “Ready-to-Assemble” concept. This paper outlines the design of a UGV equipped with IR sensor, and metal detector and controlled using Arduino microcontroller. The Arduino microcontrollers are programmed to control the UGV’s movements and the sensor data processing. The UGV is built on a six-wheel drive controlled by two motor drivers, which is equipped with IR sensor to detect the heat signature of buried landmines and a metal detector to detect metallic landmines. The GPS location of the landmine is sent directly to a mobile device using a GSM Module. The UGV is controlled using Bluetooth remotely. The design of the vehicle was performed on SolidWorks CAD software. The software was used to design the chassis, suspension system, and other components such as the metal detector and IR sensor mounts. Proteus software was used to stimulate the electronic circuitry. The UGV has potential applications in detecting and removing landmines safely, minimizing the risk of human casualties. Future work could involve improving the system's accuracy and efficiency to make it a more effective tool for landmine detection and removal.

KEYWORDS: Arduino, CAD, GPS, GSM, IR sensor, Landmine, Proteus, Ready-to-Assemble, SolidWorks, UGV

Personalized Travel Recommendation Systems: A Study of Machine Learning Approaches in Tourism

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ABSTRACT: Recommender systems that utilize machine learning algorithms are a prominent tool in the design and implementation of personalized tourism experiences. These systems analyze user data to generate recommendations for destinations, attractions, accommodations, and activities based on user preferences, behavior, and similarity to other users. Collaborative filtering and content-based filtering are two widely used machine learning algorithms in recommender systems, and hybrid systems that combine both approaches have shown to be effective in producing more accurate recommendations. Tourism recommendation systems (TRS) provide several benefits, including personalization, convenience, improved user experience, and increased revenue for tourism businesses. These systems can suggest destinations, attractions, accommodations, and activities that match user preferences and past behaviors, ultimately simplifying the trip planning process. Machine learning algorithms can be trained on large datasets to generate personalized recommendations, and can continuously improve their effectiveness by incorporating new data and user feedback. This paper provides a state-of-the-art overview of various types of recommendation systems (RS), including those based on user preferences, behaviors, demographic profiles, and social network judgments. The paper also presents a comparison table for these approaches. Additionally, the paper discusses the different stages of the travel process and the sources of data that can be used to develop a recommender system. The concluding section of the paper highlights the importance of personalized recommendations in the tourism industry and the potential for future research in this area.

Career Preparedness of the Students of Bachelor of Science in Entrepreneurship

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ABSTRACT: Higher education endeavors to hone students' strengths, give them the freedom to learn new things, and ultimately assist them in finding employment or using these skills to resolve problems. However, the challenge among recent college graduates is finding related work and starting their enterprises or careers. Hence, this study used descriptive-correlation analysis to assess the career preparedness of the Bachelor of Science in Entrepreneurship (BS Entrep) students in the College of Business Administration and Accountancy Bachelor of Science, University of Northern Philippines. Nineteen third-year and nine fourth-year BS Entrep students were the respondents of the study. Through this undertaking, the Bachelor of Science in Entrepreneurship Program faculty will assist students in getting even more practice preparing for the problems of the job market. Based on the study's findings, the majority of the third-year respondents are female, while a majority of the fourth-year respondents are male. It is reflected that the majority of the age of third-year student respondents belong to the 21-25 age bracket, and the majority of the fourth-year respondents belong to the 21-25 age bracket. The Business Plan Implementation: Product Development and Market Analysis was considered the most useful primary subject of the BS Entrep students. The third-year and fourth-year students rated their generic and curriculum skills high. Their overall level of competence along the eight indicators was also High. Taken singly, their level of competence in teamwork/collaboration got the highest mean rating described as Very High. The most useful subjects and students' level of skill preparedness are significantly related as evidence that the useful subjects are adequately observed and have reinforced their learnings and values. Furthermore, the most useful subjects are also significantly associated with the student's level of competence, competence in digital technology, and global and intercultural fluency.

KEYWORDS: 21st-Century Skills, Work Environment, Competency, Employability Skills, Curriculum.

Insurance Industry and Blockchain Technology: an Analysis of Opportunities and Challenges

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ABSTRACT:Blockchain is incorporated into our distributed platform design as a system service to facilitate the execution of transactions in insurance procedures. The insurance sector is highly reliant on several procedures between parties engaged in a transaction for opening, retaining, and closing various types of policies. Our view of data management and security has undergone a paradigm shift as a result of the emergence of blockchain technology. Blockchain technology is essential to the insurance industry for optimization of claims processing and policy automation, resulting in lower costs and greater efficiency. Additionally, the ability of blockchain to increase transparency and reduce fraudulent activity promotes credibility and trust between the insured and insurer. This paper explains how the insurance sector might profit from blockchain technology investments. We review the fundamentals of blockchain technology, major platforms currently in use, and offer a simple explanation of the insurance sub-processes that blockchain might enhance. This paper also discuss about the challenges that must be overcome for blockchain solutions to be completely adopted in the insurance industry.

KEYWORDS: Blockchain, insurer, policy automation

Rehabilitation and Resettlement of Internally Displaced People in Assam

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ABSTRACT: Large numbers of individuals have to flee their homes or places of residence annually, in the context of violence, disaster, conflict, development projects, and environmental and climate change, and stay away in their own countries. Internal displacement is an improbable catastrophe, and North-East India has the maximum amount of Internally Displaced People (IDP) in India. The people have suffered hugely in the degraded environment, the viciousness of growth and concern of violence, and political conflicts such as for space and ethnic identity. In this study, an endeavor was made to examine the rehabilitation and resettlement procedure of displaced people in Assam. The paper's main objectives are to explore the nature and extent of internal displacement caused by environmental disasters and ethnic conflict in Assam. In order to cover the scope analysis, we first designed a research framework that would serve as a guiding frame throughout the study process. So, for assessing the displacement because of ethnic conflict, four districts are chosen. The area teams within each of those districts visited just two urban centers, semi-rural and rural IDP inhabitants. The result of the study revealed that a massive chunk of the areas of Assam witnessed a series of horrendous violence in the post-colonial period. At the same time, the chronic flood problem also results in substantial displacement for the people of Assam regularly, recurring each year. Peace has been unsustainable in this state, especially in the western region of the state. Killings, extortions, violence, lootings, setting ablaze of villages, kidnappings, and soon have marked the state's political developments for a long. In recent violence trends in Assam, it is distinctly recognized that the victims are mainly the poor people residing in rural areas. Rather than providing shelter, food, and other basic needs, the government must look for permanent rehabilitation and resettlement of the internally displaced person in Assam. Cash compensation is only a part of the rehabilitation process and must be accompanied by registering the socioeconomic structure of the society. There is also a need to have a clear-cut national policy and a state whose may compensate and re-settle the internally displaced person in Assam.

KEYWORDS: Displacement, North East India, Rehabilitation and Resettlement

The Impact of Computer in Marketing in Business

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ABSTRACT: Information technology (IT) which includes computer usage has become a widely implemented marketing tool that is often being intergrated into contemporary marketing practice. In today's competitive world, you need to be abreast with all information technology pertaining to your area of marketing or business activities. Some marketing organizations often failed because of failing to attach information technology to their marketing activities. To make it a success, a well computer usage in marketing, gathering all the information such as manage and monitor complains, store, process, analyze and share vast amount of data. It also including with manufacturing productivity and improve customer service. The paper is aimed at exploring and educating prospective marketing organizations the need and significance of computer to them. It is a literature based paper and therefore, reviews related literatures from journal articles, texts and some online sources for better understanding of the concept. The paper looked into issues of how marketers used computer in their marketing activities. It further highlights how computer helps marketers in the marketing oprational activities such as web-based promotion, market research tools, distribution channel tracking and creating Ads for other media. It was found that computer had helped marketing organizations explore market share and profit maximazation. Thus the paper recommends that marketing organization, who really wants get market share and easy to advertise its products or services or operate its marketing activites , would have to start through computer.

KEYWORDS: Computer, Customer, Distribution, Marketing, Information, Technology

Alternative Assessment Practices in Higher Education during the COVID-19 Pandemic

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ABSTRACT: The COVID-19 pandemic has significantly disrupted many aspects of life including education and assessment practices in the higher education sectors. Universities worldwide had to adopt new assessment technologies as COVID-19-related restrictions made it impossible to conduct invigilated exams. Therefore, academics had to change their assessment styles, types, and formats to match the new normal. Although online education is a well-established domain where remote assessments are the usual practice, such a sudden shift made it extremely difficult to manage this within such short notice. Alternative assessments, such as online assessments, open-book exams, timed assessments, and online exams, were used as a replacement for traditional face-to-face exams. However, careful consideration and planning were necessary to ensure effectiveness, fairness, and prevention of academic misconduct. This paper examines alternative assessment practices used in different parts of the world, the historical context of invigilated exams, and the impacts of this sudden shift on academics and teaching pedagogy. Additionally, the paper provides recommended strategies to help academics plan assessment design as multi-mode delivery (i.e., hybrid approach offering both in-person and online options concurrently) and assessment practices are likely to continue in the post-COVID world. Moving forward, universities must adapt to the changing assessment practices brought about by the pandemic and develop strategies to ensure academic integrity and fair assessment practices. This includes designing assessments that are appropriate for remote delivery, incorporating new assessment technologies, and ensuring that assessments are fair and secure. Furthermore, universities must continue to explore and develop new assessment practices that meet the needs of their students in the changing landscape of higher education.

KEYWORDS: Assessment, Invigilated Exams, COVID-19, Online Exams, Open-book exams

Pharmacological Properties of Lagenaria Siceraria: A Review

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ABSTRACT: Lagenaria siceraria (LS), more commonly referred to as ‘bottle gourd’, is a type of vegetable that is widely cultivated and has several properties that have potential medical applications. The purpose of this review article is to provide a general summary of the pharmacological activities of L. siceraria that have been reported in a variety of investigations. The literature search was carried out by using a variety of databases, such as PubMed, Scopus, and Web of Science, along with keywords that were pertinent to the topic. This paper provides a concise summary of what is currently known about the pharmacological capabilities of L. siceraria, including its anticonvulsant, neuroprotective, hepatoprotective, hypoglycemic, antidiabetic, anticancer, and antimicrobial activity. This study also makes recommendations for the paths of future research. In conclusion, L. siceraria has shown a great deal of promise as a source of naturally occurring bioactive chemicals that have the potential to be exploited in the production of innovative pharmaceuticals as well as functional foods.

KEYWORDS: Lagenaria Siceraria, Pharmacological, Properties, Medicinal, Potential.

Music Recommendation System Based on Facial Emotion

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ABSTRACT: A user's emotion or mood can be detected by his/her facial expressions. Machine Learning provides various techniques through which human emotions can be detected. One such technique is to use MobileNet model with Keras, which generates a small size trained model and makes Android-ML integration easier. Music is a great connector. Music players and other streaming apps have a high demand as these apps can be used anytime, anywhere and can be combined with daily activities, travelling, sports, etc. People often use music as a means of mood regulation, specifically to change a bad mood, increase energy level or reduce tension. Also, listening to the right kind of music at the right time may improve mental health. Thus, human emotions have a strong relationship with music. In our proposed system, a mood-based music player is created which performs real time mood detection and suggests songs as per detected mood. This becomes an additional feature to the traditional music player apps that come pre-installed in our mobile phones.

KEYWORDS: Music Recommendation, Facial Emotion Recognition, Opencv, Tensorflow, CNN.

Development of Coil Harvesting Energy from the Ambient Magnetic Field

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ABSTRACT: Energy Harvesting from Magnetic Fields has been a popular study topic in recent years since it provides a sustainable and environmentally friendly alternative to existing power sources. The goal of this project is to design and construct a device for collecting energy from an ambient magnetic field using the principle of electromagnetic induction. The gadget will be made up of a magnetic coil. The energy harvester's performance will be examined and adjusted depending on numerous factors such as coil design. IoT gadgets, wearable technology, and remote systems are examples of IoT devices. In this project, a toroidal core voltage is induced in the coil, which is then delivered to the energy storage system and utilised to power IOT systems.

KEYWORDS:Energy Harvesting, magnetic field, IOT, Core

Comparison of the Air Quality within the Northern Region of India both During and after the Lockdown.

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ABSTRACT: The World Health Organization (WHO) had declared COVID-19 a global pandemic due to the novel infectious coronavirus disease found in late 2019. Some positive impacts have been seen on the natural environment during the outbreak of COVID-19. In this study we have tried to analyse the impact of lockdown on air quality at four major northern states of India (Delhi, Uttar Pradesh, Rajasthan, and Haryana) located in the National Capital Region (NCR). This study compared the variation in air pollutants during the first lockdown phase (25th March to 15th April) 2020 and after lockdown phase (25th March to 15th April) 2022, including PM₁₀, PM_{2.5}, NO₂, and SO₂. The average concentration of PM₁₀, PM_{2.5}, NO₂, and SO₂ reduced by 70.43%, 64.7%, 66.37% and 36.89% over National Capital Region (NCR) during lockdown phase. A good pollution control plan can lead to significant improvements in air quality in the future, which should provide confidence to policy makers involved in developing air quality policies.

KEYWORDS: Covid-19, lockdown, NCR, air quality.

A Tracer Study of the Bachelor of Science in Entrepreneurship Graduates for the School Year 2014- 2015 to 2016-2017 in the CBAA, UNP

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ABSTRACT: This study aimed to determine the employability of the graduates of the Bachelor of Science in Entrepreneurship of the College of Business Administration and Accountancy of the University of Northern Philippines for the School Year 2014 - 2015 to 2016-2017. Specifically, it sought to answer the following objectives: the profile in terms of age, sex, civil status, year graduated, and eligibilities/national competencies; work status in terms of employed, self-employed, and unemployed; the position in terms of middle management/supervisory and non-supervisory; appointment in terms of permanent and casual/probationary/job order; type of agency where employed in terms of public and private; job hunting time in terms of less than six months, 6 – 10 months, 11 – 15 months, 16 months or more; manner of employment in terms of personally applied, recruited, endorsed; self-employed and the nature of their business; competencies usually needed in the workplaces; most relevant subject/s. This study used the descriptive method of research. The data gathered was treated statistically using frequencies and percentages. A total of 54 Bachelor of Science in Entrepreneurship graduates comprised the respondents of the study. From the findings, the following conclusions were made: (1) Majority of the respondents belonged to the age bracket 24-26 years old, female, single, graduated the year 2016, and have Civil Service Professional Eligibility, employed, working in private agencies, contractual, and handling non-supervisory positions. (2) Majority of the respondents considered their jobs as their 1st job, job hunting time for 1-2 months, employed in the year 2016, 10,000-20,000 monthly income, personally applied and accepted their first job because of salaries and wage. (3) Majority of the self-employed respondents have online-selling as the nature of their business, considered BS Entrepreneurship as a relevant course, leadership skills as their competencies, and Entrep 102 as the most applied subject at work. On the premise of the findings and conclusions, the following recommendations were forwarded: (1) The program should establish stronger linkages with development partners, specifically the industries and business organizations, to understand better their practices and would be helpful in the development of a curriculum that would prepare graduates not only non-supervisory positions but higher-level positions in the workplace at the same time would give them the security of tenure. (2) The college, under the initiative of the Entrep Program, should conduct job fairs in collaboration with partner agencies for the graduates to find more job opportunities and better that would help the graduates understand the concept of online selling better. This could be a form of an E-Hub or Online Marketing Platform exclusively catering to the Entrep Graduates to expand their market and reach out for more customers locally and globally. (4) A follow-up study should be conducted, particularly in the performance of the program graduates, to determine the relevance of the curriculum. Another is on the Effectiveness of Online Selling that might open an opportunity for the college to consider establishing a website exclusively for CBAA Entrep Graduates.

KEYWORDS: Tracer Study, BS Entrep

Challenges and Strategies in Developing Sociolinguistic Competence for Indonesian Elementary School Students

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ABSTRACT: This research paper examines the challenges and strategies involved in developing sociolinguistic competence in elementary school pupils in Indonesia. Sociolinguistic competence is the capacity to use language appropriately in various social and cultural settings. Sociolinguistic education is an essential component of language education; however, implementing it in Indonesian elementary schools presents a few challenges, including the selection of suitable materials and activities, consideration of cultural diversity, and the development of effective teaching strategies. This paper proposes strategies for promoting sociolinguistic competence in Indonesian elementary school pupils through a literature review and analysis of extant sociolinguistics education programs. Utilizing authentic materials and activities pertinent to Indonesian culture and language, facilitating activities to develop critical thinking skills, and promoting inclusive and culturally responsive learning environments are some of the strategies employed. The paper concludes that sociolinguistics education can enhance students' language and social abilities, promote intercultural understanding and appreciation, and offers suggestions for future research in this area.

KEYWORDS: Elementary School Students, Sociolinguistic Competence, Indonesian Culture, and Instructional Strategies

A-R-T: the Way of Life of the Ilocano Creative-Arts Based Freelancers

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ABSTRACT: Freelancing is an excellent option to augment income. It is appealing and popular among Filipinos, both professionals, and non-professionals. The Province of Ilocos Sur offers a plethora of creative arts-based capacities that may be leveraged as creative business objects. The prospects for arts, crafts, and creative enterprise as a component of the creative economy in Ilocos Sur are depicted. The research aims to define what freelancing based on creative arts is all about and what it includes. The study looks into the challenges they face in their personal lives, professions, and day-to-day lives as part-time workers and freelancers. The researchers used a phenomenological method to obtain the provided responses to explain the lives and experiences of Ilocano creative-arts-focused freelancers in Ilocos Sur. The emerging themes were presented in Theme 1 - Affability. Theme - 2 Resourcefulness, and Theme - 3. Tolerance (ART). To stand out, freelancers must adhere to the right ideals, regardless of the presence of barriers. ART is one of the rising values of freelancers that drives them to persevere in creating their identities in the industry. Further, certain recommendations were also articulated.

KEYWORDS: Creative Arts, Freelance, Ilocano, Experiences, Profession

Contextual Automatic Image Caption Creation Using Pre-Trained Language Generation Model

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ABSTRACT: A picture is worth a thousand words,” but how will blind and visually impaired people identify the image? This is a very difficult task for blind people. Even under some angles, when the item’s appearance changes to the point where it is no longer recognizable, it might be challenging for the human eye to notice an object. So to develop a machine with the ability to understand and interpret the real world, one of the motivating factors for artificial intelligence researchers nowadays is the creation of machines that can comprehend and analyze problems in the real world. Preparing a machine that automatically generates descriptions from images might help blind people comprehend the story, meaning, and beauty of a picture. Automatically creating subtitles helps people better understand their environment and enables them to learn more about the photos. Image caption generation is a task describe a description of image content. Thus, captioning for images is a cross-domain issue that has significant implications for both computer vision and natural language processing. Researchers have contributed by putting forth several models and methodologies that consider the significance and difficulties associated with the automatic synthesis of captions from images. Different approaches are used to generate a caption of image. Deep learning (DL) have made it feasible to generate caption with suitable description. These generated descriptions are typically extremely similar to those seen during training. Furthermore, due to limited vocabulary the context of image contents is not considered while generating image captions. So, the proposed model describe the contexts of the image content. It is based on an encoder-decoder framework. Encoder extract feature from image and then language decoder Generative pretrained transform model is use to generate description of image.

Design & Fabrication of Extract Bio-Diesel from Waste Plastic Material

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ABSTRACT: Without conserving fossil fuels like coal, natural gas, or crude oil, the current rate of economic expansion is unsustainable. Fossil energy has various alternatives, including biomass, hydropower, and wind energy. A good waste management system is yet another crucial element. The production of all goods has increased dramatically as a result of development and modernization, which indirectly creates waste. The versatility and inexpensive cost of plastics have made them one of the materials with the most applications. Our project focuses on the extraction of OIL/DIESEL from waste plastics known as Plastic Pyrolyzed Oil, which can be sold for a lot less money than what is now available on the market. As is common knowledge, fuels made from petroleum and plastics are both hydrocarbons that contain the components of carbon and hydrogen. Pyrolysis technology is now a possibility for waste-to-energy delivery of biofuel to replace fossil fuel. The benefit of pyrolysis is that it can handle unclean and unsorted plastic. The material requires little pre-treatment. Sorting and drying of plastic are required. In contrast to incineration, pyrolysis also produces no poisonous or environmentally detrimental emissions.

KEYWORDS: Plastic Waste, Extraction of Oil, Bio-Diesel, Heat, Waste-To-Energy Etc.

Ddos Attack Detection from Optimal Feature Set in ehealth Cloud Environment – A Module Using LSTM

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ABSTRACT: Distributed denial of service (DDoS) is a common type of cyber attack in cloud computing scenario. Though the healthcare cloud was comparatively immune to attack, in recent times there had been instances of DDoS attack which caused lot of damage. It is essential to identify the attacks at the earliest. In this work the authors considered three types of DDoS attacks – ICMP Flood, TCP-SYN Flood, and LAND Flood attack in healthcloud environment. The authors propose a Long Short Term Memory (LSTM) based model to identify the data traffic as either as Flood or as Normal. The optimal feature set of the data traffic was found using ensemble based technique. The accuracy for the three types of attacks were between 98% - 99.5%. The authors compared the result with the outcome obtained with classical machine learning algorithm and found that the proposed system performed better for all the three types of attacks.

Interpretable Multi-Horizon Time Series Forecasting of Cryptocurrencies by Leveraging Temporal Fusion Transformers

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ABSTRACT: This research aims to use the proposed model for cryptocurrency markets to forecast significant events and make better-informed investment decisions. The Temporal Fusion Transformers (TFT) model comprises different components capable of attention analysis of time steps and also telling how much each feature contributes to forecasting. However, their hyperparameters greatly influence the performance and accuracy of TFT. It is challenging to choose the best collection of six hyperparameters. The Adaptive Differential Evolution (ADE) method will increase forecast accuracy and stability by assigning optimized hyperparameters to the Temporal Fusion Transformers model. Which will produce an explicable time-dynamic interpretable analysis, and we name our model ADE-TFT

Static and Dynamic Analysis of Car Front Bumper Using Different Materials

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ABSTRACT: Bumpers are structural components installed to reduce physical damage to the front and rear ends of a light/heavy motor vehicle from low-speed collisions. Damage and protection assessments are the commonly used design criteria in bumper design. For damage assessment, the relative displacements representing stiffness performance are examined and crash test will be done. In this study, impacts and collisions involving a car bumper beam model are simulated and analysed using Ansys software. The bumper should support the mechanical components and the body. It must also withstand static and dynamic loads without undue deflection or distortion. The given model is tested under frontal collision conditions at speed of 68 kmph and the resultant deformation and von-Misses stresses are determined. The three different materials (Glass-mat thermoplastic (GMT), Long-fiber-reinforced thermoplastic (LFRT), Kenaf natural fiber-reinforced thermoplastic (KLFRT)) composites are used for the bumper beam analysis. The crash analysis simulation and results can be used to assess both the crashworthiness of current bumper and to investigate ways to improve the design. Three different materials used to determine the performance of the bumper beam in crash test. The comparison of baseline material with composite material is presented in the study. This type of study methods is an integral part of the design cycle and can reduce the need for costly destructive testing program.

KEYWORDS: Bumpers, Fiber, Structural Analysis, 3-D Model, CATIA, FEM, Boundary Conditions, ANSYS.

Academic Performance Prediction using Imbalance Classification Methods: A Study

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ABSTRACT: Performance of higher education systems is sustained by student outcome i.e. student success. Success of a student can be measured by predicting his/her performance on the basis of their previous academic grades. Keeping in view the significance of this area, numerous predictive models have been developed and implemented at various higher educational institutions to recognize students at the risk of failure. Due to the imbalanced nature of the dataset, model building with high accuracy might be a challenge as it leads to the biased results. Hence, the goal of this paper is to review the articles published in the past by providing a state of the art approach. This approach is also useful to tackle imbalanced classification in higher education. It includes dataset characteristics, various methods applied on numerous datasets and a comparative analysis of algorithms used in the research. In this paper, we have also discussed the balancing methods used in the previous research of five years (2018 to 2022) and also culminated their effect to rectify the problem of imbalanced classification at three levels: data level, algorithm level and high level. It is clearly evident from the past study that out of the above mentioned three approaches, the data level approach is mainly used to ascertain imbalanced classification problems while predicting the academic performance of the students. Use of feature selection methods and hybrid methods in constructing predictive models to boost the academic performance prediction is also lacking in previous studies. This study will also guide the practitioners, academic researchers and professionals to accord with imbalanced classification primarily in the field of higher education.

KEYWORDS: Academic Performance Prediction, Machine Learning, Education System, Imbalanced Classification, Predictive Model

Design and Analysis of Vertical Axis Wind Turbine Using CFD Analysis

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ABSTRACT: The demand for renewable energy sources has made wind turbines a popular choice for generating electricity. The vertical axis wind turbine (VAWT) is an attractive option due to its compact size, easy maintenance, and ability to operate at low wind speeds. In this project, we aim to design and analyze a VAWT that can efficiently harness wind power and generate electricity.

The project involves several steps, including choosing the appropriate design, selecting the materials, determining the optimal blade geometry, and testing the turbine's performance. Key considerations include wind conditions at the installation site, power output requirements, and material selection. The geometry of 2D vertical axis wind turbine is done with CATIA V5 THEN ANSYS will be used to do fluid analysis on this 2D turbine using the sliding mesh and Ansys result will be used to generate coefficient of power vs. tip ratio diagram. We select NACA 0021 type wind turbine blade design for project. The use of CAD and CFD simulations enables us to optimize the design and performance of the turbine, while FEA software ensures its structural integrity. The design and analysis of a VAWT is an important step towards achieving a sustainable and cleaner future.

KEYWORDS: Renewable energy sources, Wind energy, Design, Materials, Blade geometry, Computational fluid dynamics (CFD), Computer-aided design (CAD), Finite element analysis (FEA)

Information Seeking Behavior of Faculty and PG Students in National Institute of Rural Development and Panchayati Raj (NIRDPR), Hyderabad: A Study

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ABSTRACT: This study aimed to analyze faculties and PG Students' information-seeking behavior at the National Institute of Rural Development and Panchayati Raj (NIRDPR) library, Hyderabad. A questionnaire-based survey method was adopted to analyze the total number of sampled respondents, i.e., fifty (50) faculties; and seventy (70) PG Students (both first year and second year) were selected through a well-designed questionnaire and Google form online. From faculties side only 36 respondents were duly filled out and submitted whereas; The response rate is about three-fourths (72%). Whereas the students 70 respondents and 65 respondents were duly filled and returned. The response rate is 94.29%. The study results show that the faculties and students expressed positive perceptions and measured their benefits.

KEYWORDS: Information Seeking Behavior, User Study, Online Resources, NIRDPR, Hyderabad.

Personalized Travel Recommendation System

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ABSTRACT: A user-specific place of interest is provided by a travel recommendation system based on social media activity to take into account their needs and preferences. The user's interest in particular travel locales may alter over time. In order to grasp recent travel desire, we have timely examined individuals' twitter data as well as the data of their friends and followers. We find tweets that are pertinent to travel using sentiment analysis. The customized trip suggestions are then derived from the travel-related tweets. Our suggested model, in contrast to the majority of personalized recommendation systems, takes into account a user's most current interests.

KEYWORDS: Social Media, Recommendation System, Place of Interest, Twitter, Sentiment Analysis.

Holographic Assistant for human-machine interaction with integrated skills towards: CHAT-GPT, Looker Studio and the Weather Channel

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ABSTRACT: Technological modernization implies a change of era in all productive sectors. That is also the case of different ways of reception and transmission of information between human-machine used in several areas for learning and developing studies. That is why several research articles focus on giving a Bot human appearance and intelligence characteristics to improve the actors' interaction. Thus, this study developed a Holographic assistant (Sale) using artificial intelligence (AI) GPT3, designed for linguistic communication synchronized with a holographic gestural diagram made on a 3D platform (Unity) to be projected on a prism (Pepper Ghost). Surveys were applied to higher education students between 18 and 25 years old who interacted with a virtual holographic system considering aspects such as perception, navigation, and performance, indicating an acceptance rate of 95%, 65%, and 85%, respectively. The structural importance when a user formulates a query is highlighted due to the agility of AI to answer specific or general questions (with or without a word limiter), considering that the same question structured differently can increase the delay in response output by 57%.

KEYWORDS: OpenAI, Hologram, GPT-3, Assistant

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